

Cleaning Stovepipes and Chimneys¹

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With ever-increasing fuel costs, heating with wood has again become very popular with Missourians. But this increased use of wood-heating equipment brings with it the need for constant, careful attention to assure the safe and efficient use of this heat source. One area often ignored is the special care needed for the chimney. This guide provides general information on cleaning chimneys.

CHIMNEY FIRES

Creosote accumulation, which is described in "Wood Stove Maintenance and Operation", is the main reason for cleaning a chimney. If the buildup of creosote on the chimney's inside surface ignites, a chimney fire results. Chimneys need cleaning to prevent this buildup and thus reduce the possibility of a chimney fire.

The extremely high temperatures (up to 2,000 degrees F) of a chimney fire can damage the chimney. The heat can warp metal chimneys and crack the tile liner on masonry chimneys.

Never use water on an extremely hot chimney fire, since this quick cooling can also crack the tile liner or warp the metal chimney. After the fire has been extinguished, have the chimney checked for warped metal or a cracked tile liner.

If you don't repair cracks or holes in the flue, the next chimney fire could be even more dangerous. Even during normal use, the sparks generated by the fire in the stove could go through the cracks or holes into the attic

or the framework surrounding the chimney. This could cause a serious house fire, resulting in loss of property and possibly loss of life.

To avoid this tragedy, you need to establish a cleaning schedule that will free your chimney of creosote buildup. This schedule can range from once every couple of weeks to no less than once a year. How often you clean the chimney depends on the amount you use your stove, the type of wood you burn, the type of wood-burning unit you have and the way you operate the unit.

If, however, a chimney fire occurs, follow these steps to reduce your losses:

- Call your local fire department immediately and give them your name and address.
- If there is a fire in the stove or fireplace box, extinguish it with a multipurpose dry-chemical extinguisher. As some of the chemical travels up the chimney, it may extinguish the chimney fire.

CLEANING THE FLUE

You can either clean the chimney yourself or hire a professional chimney sweep. Chimney sweeps who will do a thorough and professional job are available in many communities. Watching a sweep clean your chimney would not only be educational, but would also help you decide whether or not to tackle the job yourself next time.

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Before deciding to clean your chimney yourself, consider your physical condition. Cleaning a chimney can be strenuous work. Pulling a chimney brush the height of the chimney can strain the back and other muscles. Make sure you are up to the job before starting.

If you do decide to clean your chimney yourself, make these preparations before beginning the actual cleaning job.

1. Gather the basic tools that you will need:
 - a. Powerful flashlight
 - b. Drop cloths
 - c. Wide masking or duct tape
 - d. Ladder
 - e. Mirror (helpful for looking up the chimney from the bottom)
 - f. Bucket
 - g. Industrial-type shop vacuum (Don't use a household vacuum cleaner because the fine dust can ruin the motor's bearings; also, some of the dust can go through the vacuum cleaner's filter into the room.)
 - h. Goggles or a face shield
 - i. Dust mask
 - j. Old clothes and gloves
2. Make sure the chimney is structurally safe. If it is not, it can fall apart when a horizontal load such as a ladder or your weight leans against it.
3. If you are cleaning a fireplace chimney, take the damper plate out; it is usually attached to its support by a couple of cotter pins. Be careful - the metal can be brittle because of exposure to extreme heat.
4. Using a powerful flashlight, check the openings from the top and bottom for obstructions such as bird's nests. Also, check the extent of creosote buildup. The largest concentration of creosote should be in the upper one-third of the chimney.
5. Seal off the fireplace opening by taping a damp sheet over it; otherwise you could end up with quite a mess in the house. On a wood-burning stove, remove the stovepipe from the chimney and cover the opening. On many chimneys, you will have an outside bottom clean-out. Make sure you can open it before you start cleaning.

Now you are ready to start cleaning the chimney. The best time to clean is when the chimney is still warm, since creosote comes off a warm surface easier

than a cooler surface. But make sure the fire is completely out.

The following are some of the more common methods for cleaning chimneys:

Wire chimney brush. The best method for cleaning your chimney is scraping it with a wire chimney brush. The brush may seem expensive, but for people who burn a lot of wood and must clean their chimney more than once a year, a brush gives the best results.

You can buy brushes from most retail outlets that sell wood-burning stoves or fireplace equipment. Brushes are available in different sizes depending upon the shape and size of your flue. Buy a brush designed to fit your flue.

Some brushes have a rope attached to one end to pull the brush up and down the chimney. For this type of brush, attach a weight of some kind to the other end to pull the brush down the chimney. Wrap cloth around the weight so it doesn't damage the chimney if the weight bounces against the inside surface.

Other techniques. There are other techniques you can use with some degree of success, such as scraping the chimney with a burlap bag filled with straw or tire chains, chicken wire rolled into a ball, etc. The main disadvantages of these alternatives is that they are not able to provide enough abrasion to clean all the creosote out of the flue.

System management. Another cleaning technique that deserves careful consideration is system management. You can eliminate much of the creosote buildup with correct operation of the system. Burning well-seasoned wood cuts down on creosote buildup.

If you own one of the new "high efficiency" stoves, you may face special problems. These stoves increase heating efficiency by allowing less heat to escape through the flue. This results in lower metal temperatures in the flue. Since creosote condenses more easily on cooler surfaces than on extremely hot surfaces, this type of stove is particularly prone to creosote buildup. To solve the problem, burn an intense fire in your stove for at least one-half hour daily with the damper open. This should burn off the accumulated creosote in small quantities and reduce the potential for a chimney fire.

Keep in mind that you also need to clean smoke pipes used with wood-burning furnaces and stoves. Remove the pipe carefully and take it outside where it

will be easier to clean. Tape a bag or place a bucket at one end of the pipe to collect the creosote for disposal. A long-handled wire brush will normally clean most of the creosote buildup off the stovepipe.

CLEAN UP TIME

Now that the chimney is clean, it's time to go back inside the house to clean up the soot and creosote that has fallen to the bottom of the chimney. If you are cleaning a fireplace, carefully remove the seal from the fireplace opening and sweep the soot and creosote into containers. Make sure you sweep out the accumulation on the smoke shelf above the damper, too. It is better to use an industrial or shop vacuum cleaner for this job. After this initial cleanup, use a wire brush to scrape off the deposits from the inside of the fireplace and from around the smoke shelf. Tidy up the area, and you're finished.

Remember, chimney fires are very dangerous and are a major cause of wood-burning related house fires. The more you do to keep your chimney in good working condition, the safer and more efficient your wood-burning operation will be.